

Trends in Hospitalization for Selected Foodborne Pathogens: Data from the National Hospital Discharge Survey (NHDS).

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Background: In recent years, the Foodborne Diseases Active Surveillance Network (FoodNet) has documented significant decreases in the incidence of laboratory-confirmed *Campylobacter*, *Listeria* and, to a lesser extent, *Salmonella*. The changes in the incidence for these infections might be attributed to fewer persons with self-limited illness seeking medical care and fewer submitted diagnostic specimens. If this were the case, because persons with severe infection would still seek care, the number of hospitalizations for these infections should be largely unchanged from year to year. We, therefore, examined national trends in number of hospitalizations from 1996 through 2003 for *Campylobacter*, *Listeria* and *Salmonella*.

Methods: The annual number of hospitalizations for *Campylobacter* (ICD-9-CM: 008.43), *Listeria* (ICD-9-CM: 027.0), and *Salmonella* (ICD-9-CM: 003.0 through 003.9) were determined from listed diagnoses in the National Hospital Discharge Survey (NHDS) of CDC's National Center for Health Statistics. To examine patterns in hospitalizations over time, we fit pathogen-specific regression models to compare the number of hospitalizations for each year relative to 1996. All analyses were adjusted for age, gender, geographic region, marital status and payment source.

Results: The NHDS collected approximately 300,000 records per year from 1996 to 2003. During the 8 year period, 57,564 patients were hospitalized for *Campylobacter*, 28,416 were hospitalized for *Salmonella*, and 3,736 were hospitalized for *Listeria*. From 1996 to 2003, decreases in the number of hospitalizations were seen for *Campylobacter* and *Listeria* but not for *Salmonella*. In 2003, compared to 1996, the number of hospitalizations was significantly lower for *Campylobacter* (OR: 0.37, 95%CI: 0.14, 0.94) and *Listeria* (OR: 0.10, 95%CI: 0.02-0.51) but not significantly different for *Salmonella*.

Conclusion: The patterns observed in the number of hospitalizations for *Campylobacter*, *Listeria*, and *Salmonella* infections from 1996 to 2003 are similar to patterns observed in incidence reported by the FoodNet. These similarities serve as validation of reports of continued decrease in the occurrence of specific foodborne pathogens.